

# Spanish accented Dutch: Accentedness, Intelligibility and Evaluative Reactions towards accented Speech

Bachelor thesis

Theme 12: Spanish accented Dutch

Radboud University Nijmegen

M. A. H. Paridaans

Drs. K. W. M. van Krieken and drs. J. M. Burgos y Guillen (supervisors)

Dr. B. J. H. Hilberink-Schulpen (2<sup>nd</sup> corrector)

## **Abstract**

This study explores the relationship among language proficiency, intelligibility, accentedness and the evaluative judgments of native listeners towards foreign accented speakers. In total, 316 native speakers of Dutch listened to recordings of two native Dutch speakers and eight Spanish learners of Dutch with varying proficiency levels of Dutch. The listeners rated the records for degree of foreign accentedness, intelligibility and status. Furthermore, the participants completed a Language Background Questionnaire, so that their familiarity with Spanish could be compared to their ratings. The results indicated that the speech samples of all Spanish L2 learners were rated as more foreign accented than the recordings of the native Dutch speakers. Overall, the listeners found the native Dutch speakers to be significantly more intelligible than the Spanish L2 learners of Dutch, except for the male B1 speaker. Although there were some exceptions, the listeners tended to assign higher intelligibility scores as the language proficiency of Spanish L2 speakers increased. Furthermore, the native Dutch speakers received higher status ratings than the Spanish learners of Dutch. Familiarity with Spanish speakers of Dutch did not influence the listeners' ratings of accentedness, intelligibility or status.

**Keywords** language proficiency, accentedness, intelligibility, status, familiarity

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## **Introduction**

Since globalisation and internationalisation cause an increase of people working, living and studying abroad, we are daily exposed to various languages and different accents. People who are living abroad, want to be able to communicate efficiently in their host country. Therefore the number of second language (L2) learners is increasing (Kassteen, 2013). A point of attention during L2 acquisition is pronunciation, since an intelligible pronunciation is needed for successful communication. However, pronunciation has been neglected in the classroom and is difficult to learn (Piske, MacKay & Flege, 2001; Derwing & Munro, 2005). To a certain degree, all L2 learners speak with a foreign accent. Accent can be described as ‘a manner of pronunciation with grammatical, syntactical, morphological and lexical levels being regarded as more or less commensurate with the standard’ (Giles, 1970, p. 213). This implies that the accent of L2 learners deviates from the pronunciation which is considered as standard in a certain language. According to Piske et al. (2001, p. 195), various factors are hypothesized to influence the degree of L2 foreign accent, such as ‘age of L2 learning, length of residence in an L2-speaking environment, gender, formal instruction, motivation, language learning aptitude and amount of L1/L2 use’. It has also been shown that foreign accent is influenced by one’s native language (L1) (Suter, 1976; Purcell & Suter, 1980; Flege, Schirru & MacKay, 2003; Burgos, Cucchiari, Van Hout & Strik, 2014a).

A complete elimination of foreign accent seems impossible. Piske et al. (2001) investigated the effects of age of learning and length of residence (LOR) in a L2 speaking environment on degree of foreign accentedness. The degree of foreign accent of early and late Italian learners of English was rated by Canadian English listeners. Results indicated that the degree of L2 foreign accent decreased as the speakers had spent more time in Canada. However, after the Italian learners of English had spent a certain amount of time in Canada, increases in length of residence did not further reduce the speakers’ foreign accent. Although longitudinal research is needed to determine till what point LOR can ameliorate the accent of L2 learners, the results suggest that it is difficult to completely eliminate a foreign accent (Piske et al., 2001).

Nevertheless, it is frequently asserted that one needs to eliminate a foreign accent to be completely intelligible (Munro & Derwing, 1995). Therefore, accent reduction programs are popular. However, it appears that a foreign accent does not inevitably decrease intelligibility (Munro & Derwing, 1995; Derwing & Munro, 1997). Intelligibility can be described as ‘the extent to which a speaker’s message is actually understood by a listener’ (Munro & Derwing, 1995, p. 76). Munro and Derwing (1995) used recorded speech of ten Mandarin L2 learners of

English to explore the relationship between accentedness and intelligibility. Eighteen native speakers of English were asked to write down the speech samples in standard orthography in order to determine the intelligibility. It appeared that the listeners were able to transcribe the excerpts of the Mandarin learners of English perfectly, even though the accent ratings varied widely. For only 5 listeners, accentedness and intelligibility were significantly negatively correlated. Derwing and Munro (1997) extended their work on accentedness and intelligibility, using speakers from various language backgrounds. English utterances of Cantonese, Japanese, Polish and Spanish L1 learners of English were transcribed and assessed by native English listeners. Comparisons between the accent ratings and transcriptions scores showed that the majority of both scores were high, indicating that a high degree of foreign accent did not necessarily reduce intelligibility.

It is possible that familiarity with a foreign language interacts with the intelligibility of non-native speech (Derwing & Munro, 1997; Gass & Varonis, 1984). Derwing and Munro (1997) found evidence that familiarity and intelligibility are correlated. The listeners who reported to be familiar with a particular language, made significantly less errors while transcribing speech samples of non-native English speakers of that language background. Furthermore, it appeared that familiarity with a certain language improved the ability to determine the L1 of a speaker. Gass and Varonis (1984) reported that familiarity with a specific non-native accent facilitated comprehensibility of non-native speakers with the same language background.

Although accentedness may not influence the intelligibility of a non-native speaker, a foreign accent can influence the listener's perceptions of the speaker. Listeners tend to downgrade non-native speakers because of their foreign accent. For instance, listeners accord lower ratings of status towards foreign-accented speakers (Ryan & Carranza, 1975; Ryan, Carranza & Moffie, 1977; Brennan & Brennan, 1981; Fuertes, Gottdiener, Martin, Gilbert & Giles, 2012). Status can be described as 'evaluations about the speaker's intelligence, competence, ambition, education and social class' (Fuertes et al., 2012, p. 121). For example, in the study by Ryan and Carranza (1975), the speech of native speakers of English and Mexican American speakers of accented English was evaluated by Mexican American, black and Anglo students. Non-accented English speech received higher status ratings than foreign accented speech, irrespective of the listeners' different ethnic backgrounds. The results of the study by Ryan et al. (1977) also indicated that accentedness influences the evaluative reactions of listeners. Taped recordings of Spanish-English bilingual speakers with varying degrees of foreign accentedness were judged by native speakers of English. It appeared that

an increase in the degree of foreign accent caused less favourable judgements of status. Brennan and Brennan (1981) reported that Mexican American speakers were rated significantly lower on status by Mexican American and Anglo students as their degree of foreign accent augmented.

Since the number of L2 learners is increasing, it is important to explore the impact of a foreign accent in L2 speech. Most studies have focused on the effects of non-native accents in English-speaking countries (Piske et al., 2001; Fuertes et al., 2012). However, foreign accentedness should be studied in a variety of languages, as ‘the degree of success with which L2 sounds can be learned is largely dependent on the perceived phonetic similarity between L1 and L2 sounds’ (Piske et al., 2001, p. 212). The phonological systems of the native language and the second language influence one other (Flege et al., 2003). It seems reasonable to assume that the interaction between one’s native language and a L2 other than English results into different effects on accentedness and intelligibility than those found in studies focussing on English as L2. Furthermore, the native-speaker’s attitude towards foreign accents should be studied in different national contexts, since cultural differences can influence the evaluations of nonnative speech (Fuertes et al, 2012).

The aim of the present study is to examine the degree of foreign accent in the Dutch pronunciation of Spanish learners of Dutch and its influence on intelligibility and the evaluative reactions towards the accented speech. According to Burgos et al. (2014a), the Spanish sound system influences the Dutch pronunciation of Spanish learners of Dutch. Recordings of Spanish L1 learners of Dutch were analysed in order to determine whether their L1 influenced their Dutch pronunciation. The speakers’ CEFR (Common European Framework of Reference) varied from A1 tot B2. The results indicated that the pronunciation of Dutch vowels appeared to be more problematic for the Spanish speakers than the pronunciation of Dutch consonants. This can be ascribed to differences between the Spanish and Dutch vowel systems: Dutch has fifteen unreduced vowels and one reduced vowel (schwa /ə/), whereas Spanish has only five (/a, e, i, o, u/). While speaking Dutch, the participants tended to produce vowels similar to the five Spanish vowels (Burgos et al., 2014a). However, the amount of pronunciation errors seemed to decrease as the speaker’s proficiency of Dutch increased. The results indicated that the Spanish speakers with an A1 level of Dutch mispronounced more vowels than speakers with a B2 level (Burgos et al., 2014a). Therefore, it is plausible that language proficiency and degree of foreign accent are negatively correlated.

The present research will further explore the relationship between language proficiency, accentedness, intelligibility and status ratings. Furthermore, we will examine whether prior knowledge of Spanish affects the intelligibility of Spanish accented speech, the perceived degree of foreign accentedness and the evaluative reactions towards this accented speech. The results will contribute to raising awareness of the effects of foreign accents. Foreign accented speech can activate stereotypes in the same way as ethnicity, age, gender and skin colour, and therefore lead to discrimination in the workplace (Carlson & McHenry, 2006; Depez-Sims & Morris, 2010). L2 learners should be aware that their foreign accent can reduce their prospective employability, so they can consider accent modification (Carlson & McHenry, 2006). Not only L2 learners, but also native speakers should be aware of the effects of non-native accents. Studies have shown that the perceptions of one's suitability for a job can be influenced by a foreign accent. Managers should be conscious that they tend to evaluate applicants with a foreign accent more negatively than native speakers, while having an accent does not determine one's intelligence or competence (Carlson & McHenry, 2006; Depez-Sims & Morris, 2010).

The research questions that need to be answered in the present study are the following:

- RQ1. To what extent does the language proficiency of the Spanish L1 learners of Dutch influence the ratings of accentedness, intelligibility and status of Dutch native listeners?
  - RQ1a. To what extent does the speech of Spanish L1 learners of Dutch influence the degree of accentedness perceived by Dutch native listeners?
  - RQ1b. To what extent does the speech of Spanish L1 learners of Dutch influence the degree of intelligibility perceived by Dutch native listeners?
  - RQ1c. To what extent does the speech of Spanish L1 learners of Dutch influence the status ratings of the Dutch native listeners?
- RQ2. To what extent does familiarity with the Spanish language of the Dutch native listeners influence their ratings of accentedness, intelligibility and status towards the speech of Spanish L1 learners of Dutch?

## Method

### *Materials*

In this experiment, recordings of speech produced by eight Spanish L1 learners of Dutch and two Dutch native speakers were used (see Appendix 1). The recordings of the Spanish L2 learners were selected from the corpus of Spanish L1 Dutch L2, which was collected in Burgos, Jani, Cucchiarini, Van Hout and Strik (2014b). The Spanish learners of Dutch (four males and four females) came from Spain and Latin American countries and differed in proficiency level of Dutch. The participants had rated their level of Dutch using the CEFR Self-Assessment Grid. The ratings varied from A1 to B2 (A1,  $n = 2$ ; A2,  $n = 2$ ; B1,  $n = 2$ ; B2,  $n = 2$ ). One male and one female speaker were recorded of each proficiency level.

The speech samples of the Dutch native speakers were recorded for this experiment. The Dutch native speakers (one male and one female) were Dutch language teachers at Radboud in'to Languages, the language centre of the Radboud University, and spoke standard Dutch (ABN; *Algemeen Beschaafd Nederlands*).

The Dutch natives and the Spanish L2 learners were recorded while reading a text consisting of 62 words. The words contained sounds that were difficult to pronounce for the Spanish speakers (Burgos et al., 2014b). The text passage was:

Het wordt druk op de arbeidsmarkt.

Een op de tien jongeren zit nu al werkloos thuis, blijkt uit de laatste cijfers van het Centraal Bureau voor de Statistiek. Ook onder mensen van dertig jaar en ouder en onder vijftigplussers wordt de werkloosheid een steeds groter probleem. Tegelijkertijd moeten mensen die nu rustig thuis zitten en helemaal geen werk zoeken, de arbeidsmarkt op.

### *Participants*

In total, 316 listeners (49.4% were male, 50.6% were female) participated in the experiment. The participants were all native speakers of Dutch. Most listeners had the Dutch nationality (99.4%); two participants were Belgians.

The age of the listeners ranged from 17 to 76 years ( $R = 59$ ), with a mean of 26.39 years. The educational level of the participants ranged from primary school ( $n = 3$ ) to university ( $n = 55$ ). The most frequent level of education was secondary school (49.1%). In total, 145 participants

(45.9%) indicated to have knowledge of the Spanish language. However, only 34 participants (23.4%) rated their level of Spanish as fairly OK, good or excellent. In total, 132 respondents (41.8%) were familiar with Spanish L1 learners of Dutch.

Chi-square tests showed no significant relation between version and gender ( $\chi^2(9) = 10.23, p = .332$ ), between version and nationality ( $\chi^2(9) = 8.59, p = .476$ ), between version and educational level ( $\chi^2(36) = 45.10, p = .142$ ) or between version and familiarity with Spanish speakers of Dutch ( $\chi^2(9) = 10.46, p = .315$ ). A one-way analysis of variance showed no significant relation between age and version ( $F(39, 276) = 1.33, p = .102$ ).

### Design

The experiment had a 10x2 between-subjects design (see Figure 1). The subjects were randomly exposed to one of ten recordings of text (eight texts read by non-native speakers and two texts read by Dutch native speakers). Each listener was exposed to one of five language proficiency levels (A1, A2, B1, B2 or ABN). At least 30 participants were exposed to each condition, of which at least ten were familiar with Spanish L1 speakers of Dutch. Within each condition, three variables (intelligibility, accentedness and status) were examined. The recordings of the Dutch native speakers served as a control group.

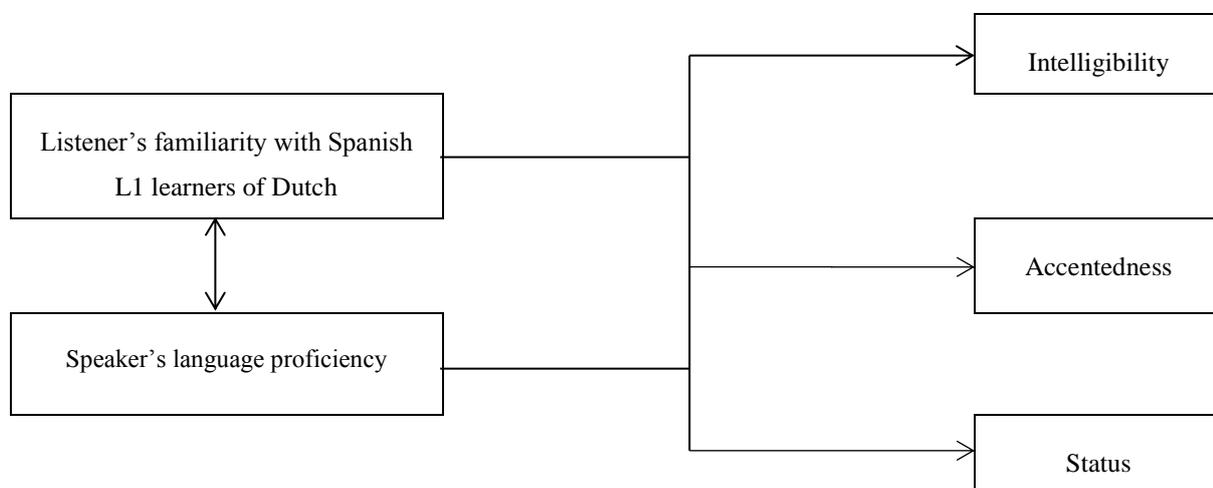


Figure 1. Conceptual model of the relationship among the dependent and independent variables.

### Instruments

In the present study, intelligibility was measured using three statements anchored by seven-point Likert scales ('I think the speaker is unintelligible'; 'I find it hard to understand the speaker'; and 'I could write down exactly what the speaker has said'). The reliability of the intelligibility scale comprising three items was good:  $\alpha = .86$ .

Accentedness was measured by using four seven-point semantic differentials: The speaker has... ‘a poor pronunciation’ – ‘a good pronunciation’; ‘a strong foreign accent’ – ‘no foreign accent’, ‘no fluent Dutch pronunciation’ – ‘a fluent Dutch pronunciation’; and ‘The speaker is no native speaker of Dutch’ – ‘a native speaker of Dutch’. The reliability of the accentedness scale comprising four items was very good:  $\alpha = .93$ . An example of semantic differential:

De spreker heeft...									
een slechte uitspraak	0	0	0	0	0	0	0	0	een goede uitspraak

The status ratings towards accented speech were measured using the bipolar adjective scales employed by Ryan and Carranza (1975). Status was rated by using four seven-point semantic differentials (‘uneducated’ – ‘educated’; ‘ignorant’ – ‘intelligent’; ‘unsuccessful’ – ‘successful’ and ‘poor’ – ‘wealthy’). The reliability of the status scale comprising four items was good:  $\alpha = .89$ .

Furthermore, a Language Background Questionnaire was developed, containing questions concerning the subjects’ gender, age, nationality, mother tongue, completed education and the subjects’ proficiency of foreign languages.

*Procedure*

The participants were approached personally on Facebook or by email. Each participant received a hyperlink to an online questionnaire (see Appendix 2). A total of ten online questionnaires was composed in Qualtrics. Each questionnaire contained a different text recording. The listeners were randomly assigned to one of the surveys and listened to one recording only. They were not told that they would listen to utterances spoken by Spanish learners of Dutch or by Dutch native speakers.

The online questionnaire consisted of three parts. In the first part, the participant answered questions concerning personal information. In the second part, the listener was asked to rate the accentedness and intelligibility of the speaker and to judge the status of the speaker. In the last part, the participant answered questions concerning their philology.

It took approximately 5 minutes to complete the questionnaire.

*Statistical treatment*

Pearson correlations were conducted to determine the correlations between accentedness, intelligibility and status. Two-way ANOVA’s were used to explore the effects of language

proficiency and familiarity with Spanish on accentedness, intelligibility and ratings of status. One-way ANOVA's were developed to further explore the influence of language proficiency on accentedness, intelligibility and status.

## Results

A significant positive correlation was found between accentedness and intelligibility ( $r(316) = .65, p < .001$ ). Speakers with higher accentedness scores were shown to be more intelligible than speakers with lower accentedness score. A significant positive correlation was found between accentedness and status ( $r(316) = .57, p < .001$ ). Speakers with higher accentedness scores were shown to receive higher status scores than speakers with lower accentedness score. A significant positive correlation was found between intelligibility and status ( $r(316) = .52, p < .001$ ). Speakers with higher intelligibility scores were shown to receive higher status scores than speakers with lower accentedness score (see Table 1).

Table 1. Correlations ( $r$ ) between accentedness, intelligibility and status.

variable	intelligibility	status
intelligibility		
status	.52*	
accentedness	.65*	.57*

\*  $p < .001$

A two-way analysis of variance with language proficiency and familiarity with Spanish as factors showed a significant main effect of language proficiency on accentedness rating ( $F(9, 296) = 91.11, p < .001$ ). Familiarity with Spanish was not found to have a significant main effect on accentedness rating ( $F(1, 296) < 1$ ). The interaction between language proficiency and familiarity with Spanish was not statistically significant ( $F(9, 296) = 1.19, p = .300$ ). A one-way analysis of variance was carried out to further examine the effect of language proficiency on accentedness, which showed a significant effect of proficiency level of Dutch on accentedness ( $F(9, 306) = 92.23, p < .001$ ). Post hoc tests showed that the degree of foreign accent of the female A1 speaker ( $M = 1.62, SD = .55$ ) was higher than the degree of foreign accent of the male B1 speaker ( $M = 2.78, SD = .97$ ) (Bonferroni correction,  $p < .001$ ) and the male B2 speaker ( $M = 2.59, SD = 1.09$ ) (Bonferroni correction,  $p = .008$ ). The female ABN speaker ( $M = 6.13, SD = 1.23$ ) and the male ABN speaker ( $M = 5.98, SD = 1.22$ ) received lower ratings of foreign accentedness than the Spanish L2 learners of Dutch (see

Table 2) (Bonferroni correction,  $p'\Delta < .001$ ). Other comparisons were not significant (Bonferroni,  $p'\Delta > .051$ ).

Table 2. The ratings of accentedness, intelligibility and status as functions of language proficiency (A1, A2, B1, B2 or ABN), gender and familiarity with Spanish learners of Dutch (1 = low rating, 7 = high rating).

language proficiency	familiarity with Spanish	accentedness		intelligibility		status		<i>n</i>
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
A 1 – female	familiar	1.62	0.51	2.42	1.01	3.77	0.91	15
	unfamiliar	1.63	0.61	2.21	0.64	3.86	0.93	16
	total	1.62	0.55	2.31	0.83	3.81	0.91	31
A 1 – male	familiar	1.85	0.73	3.37	1.07	3.68	0.97	10
	unfamiliar	1.99	1.19	2.93	1.64	3.74	1.08	23
	total	1.95	1.06	3.06	1.49	3.72	1.03	33
A2 – female	familiar	2.08	0.94	3.35	0.98	3.90	0.90	10
	unfamiliar	1.85	0.67	3.72	1.39	4.03	0.66	20
	total	1.93	0.76	3.59	1.26	3.98	0.74	30
A2 – male	familiar	1.55	0.47	2.57	0.88	3.20	1.36	10
	unfamiliar	2.46	1.41	3.02	1.43	3.64	0.66	20
	total	2.16	1.25	2.87	1.28	3.49	0.95	30
B1 – female	familiar	2.33	0.82	4.49	1.64	4.27	0.55	13
	unfamiliar	2.13	0.60	3.87	1.43	3.91	0.92	19
	total	2.21	0.69	4.12	1.52	4.05	0.80	32

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B1 – male	familiar	2.96	1.17	5.35	1.04	4.31	0.82	13
	unfamiliar	2.63	0.78	5.47	1.49	3.78	0.56	17
	total	2.78	0.97	5.42	1.30	4.01	0.72	30
B2 – female	familiar	1.82	0.63	3.27	1.04	3.52	0.68	11
	unfamiliar	2.18	1.01	2.93	1.13	3.90	0.68	21
	total	2.05	0.90	3.05	1.10	3.77	0.70	32
B2 – male	familiar	2.72	1.29	5.02	1.42	3.79	0.87	17
	unfamiliar	2.43	0.80	4.17	1.27	4.11	0.75	14
	total	2.59	1.09	4.63	1.40	3.94	0.82	31
ABN – female	familiar	5.90	1.50	5.95	0.80	5.20	0.59	20
	unfamiliar	6.43	0.66	6.24	0.79	5.17	0.55	15
	total	6.13	1.23	6.08	0.80	5.19	0.56	35
ABN – male	familiar	6.04	1.27	6.05	1.10	4.96	0.93	13
	unfamiliar	5.95	1.23	5.81	0.92	5.11	1.00	19
	total	5.98	1.22	5.91	0.98	5.05	0.96	32
Total	familiar	3.11	1.99	4.36	1.71	4.15	1.04	132
	unfamiliar	2.89	1.84	3.95	1.78	4.10	0.94	184
	total	2.98	1.90	4.13	1.76	4.12	0.98	316

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A two-way analysis of variance with language proficiency and familiarity with Spanish as factors showed a significant main effect of language proficiency on intelligibility ( $F(9, 296) = 37.71, p < .001$ ). Familiarity with Spanish was not found to have a significant main effect on intelligibility ( $F(1, 296) = 1.09, p = .298$ ). The interaction between language proficiency and familiarity with Spanish was not statistically significant ( $F(9, 296) < 1$ ). A one-way

analysis of variance was carried out to further examine the relationship between language proficiency and intelligibility, which showed a significant effect of proficiency level of Dutch on intelligibility ( $F(9, 306) = 39.34, p < .001$ ) (see Table 2). Post hoc tests showed that the female ABN speaker ( $M = 6.08, SD = .80$ ) was more intelligible than the female ( $M = 2.31, SD = .83$ ) (Bonferroni,  $p < .001$ ) and male ( $M = 3.06, SD = 1.49$ ) (Bonferroni,  $p < .001$ ) A1 speakers, the female ( $M = 3.59, SD = 1.26$ ) (Bonferroni,  $p < .001$ ) and male ( $M = 2.87, SD = 1.28$ ) (Bonferroni,  $p < .001$ ) A2 speakers, the female B1 speaker ( $M = 4.12, SD = 1.52$ ) (Bonferroni,  $p < .001$ ), the female B2 speaker ( $M = 3.05, SD = 1.10$ ) (Bonferroni,  $p < .001$ ) and the male B2 speaker ( $M = 4.63, SD = 1.40$ ) (Bonferroni,  $p < .001$ ). The male ABN speaker ( $M = 5.91, SD = .98$ ) was more intelligible than the female ( $M = 2.31, SD = .83$ ) (Bonferroni,  $p < .001$ ) and male ( $M = 3.06, SD = 1.49$ ) (Bonferroni,  $p < .001$ ) A1 speakers, the female ( $M = 3.59, SD = 1.26$ ) (Bonferroni,  $p < .001$ ) and male ( $M = 2.87, SD = 1.28$ ) (Bonferroni,  $p < .001$ ) A2 speakers, the female B1 speaker ( $M = 4.12, SD = 1.52$ ) (Bonferroni,  $p < .001$ ), the female B2 speaker ( $M = 3.05, SD = 1.10$ ) (Bonferroni,  $p < .001$ ) and the male B2 speaker ( $M = 4.63, SD = 1.40$ ) (Bonferroni correction,  $p = .002$ ). The male B2 speaker ( $M = 4.63, SD = 1.40$ ) appeared to be more intelligible than the female ( $M = 2.31, SD = .83$ ) (Bonferroni,  $p < .001$ ) and the male ( $M = 3.06, SD = 1.49$ ) (Bonferroni,  $p < .001$ ) A1 speakers, the female ( $M = 3.59, SD = 1.26$ ) (Bonferroni,  $p = .043$ ) and the male ( $M = 2.87, SD = 1.28$ ) (Bonferroni,  $p < .001$ ) A2 speakers, and the female B2 speaker ( $M = 3.05, SD = 1.10$ ) (Bonferroni correction,  $p < .001$ ). The female B1 speaker ( $M = 4.12, SD = 1.52$ ) was rated as more intelligible than the female ( $M = 2.31, SD = .83$ ) (Bonferroni,  $p < .001$ ) and male ( $M = 3.06, SD = 1.49$ ) (Bonferroni,  $p = .024$ ) A1 speakers, the male A2 speaker ( $M = 2.87, SD = 1.28$ ) (Bonferroni,  $p = .003$ ) and the female B2 speaker ( $M = 3.05, SD = 1.10$ ) (Bonferroni correction,  $p = .022$ ). The male B1 speaker ( $M = 5.42, SD = 1.30$ ) was more intelligible than the female ( $M = 2.31, SD = .83$ ) (Bonferroni,  $p < .001$ ) and male ( $M = 3.06, SD = 1.49$ ) (Bonferroni,  $p < .001$ ) A1 speakers, the female ( $M = 3.59, SD = 1.26$ ) (Bonferroni,  $p < .001$ ) and male ( $M = 2.87, SD = 1.28$ ) (Bonferroni,  $p < .001$ ) A2 speakers, the female B1 speaker ( $M = 4.12, SD = 1.52$ ) (Bonferroni,  $p = .002$ ) and the female B2 speaker ( $M = 3.05, SD = 1.10$ ) (Bonferroni correction,  $p < .001$ ). The female A2 speaker ( $M = 3.59, SD = 1.26$ ) was more intelligible than the female A1 speaker ( $M = 2.31, SD = .83$ ) (Bonferroni correction,  $p = .002$ ). Other comparisons were not significant (Bonferroni,  $p' \Delta > .570$ )

A two-way analysis of variance with language proficiency and familiarity with Spanish as factors showed a significant main effect of language proficiency on status rating ( $F(9, 296) =$

14.85,  $p < .001$ ). Familiarity with Spanish was not found to have a significant main effect on status rating ( $F(1, 296) < 1$ ). The interaction between language proficiency and familiarity with Spanish was not statistically significant ( $F(9, 296) = 1.01, p = .428$ ). A one-way analysis of variance was carried out to further examine the relationship between language proficiency and status, which showed a significant effect of proficiency level of Dutch on status ( $F(9, 306) = 15.10, p < .001$ ). The native Dutch man ( $M = 5.05, SD = .96$ ) and native Dutch woman ( $M = 5.19, SD = .56$ ) received higher status ratings than the Spanish learners of Dutch (see Table 2) (Bonferroni correction,  $p' \Delta < .001$ ). Other comparisons were not significant (Bonferroni,  $p' \Delta > .355$ ).

### **Conclusion and discussion**

A group of native speakers of Dutch rated read speech samples produced by eight Spanish learners of Dutch – varying in proficiency level of Dutch – and two native Dutch speakers for foreign accent, intelligibility and status. Our first research question aimed at exploring to what extent the ratings of the native Dutch listeners were influenced by the language proficiency of the Spanish L1 learners of Dutch. The results indicate that the speech samples of all Spanish L2 learners were rated as more foreign accented than the recordings of the native Dutch speakers. The female A1 speaker appeared to have a higher degree of foreign accent than the male B1 speaker and the male B2 speaker. Overall, the listeners found the ABN speakers to be significantly more intelligible than the Spanish L2 learners of Dutch, except for the male B1 speaker. Although there were some exceptions, the listeners tended to assign higher intelligibility scores as the language proficiency of Spanish L2 speakers increased.

Furthermore, the results of this study demonstrated that the native Dutch speakers received higher status ratings than the Spanish learners of Dutch. No significant differences in status ratings were found between the various proficiency levels of the L2 learners.

Since this study was not longitudinal, the accentedness ratings for the various proficiency levels cannot be interpreted as progress of individual L2 learners. However, the results do indicate that foreign accentedness decreases as the language proficiency of L2 learners amends. These results correspond to the results of Burgos et al. (2014a), which indicated that certain pronunciation errors of Spanish speakers of Dutch disappeared as the language proficiency increased. Presumably, the speakers with a higher language proficiency level in this study have received a larger amount of formal instruction than L2 learners with a lower proficiency and have practiced more. According to Piske et al. (2001), training in the production of L2 speech sounds can influence the degree of foreign accentedness. Therefore,

one could suggest that formal instruction affects foreign accentedness. However, more research is needed to determine to what extent differences in accentedness are defined by language proficiency or formal instructions. Other variables, such as gender, age of learning, learning aptitude and length of residence could also affect the degree of perceived foreign accent (Piske et al., 2001).

In our study, language proficiency appears to correlate with accentedness. Furthermore, accentedness correlates with intelligibility. Speakers who were rated as less foreign accented were shown to receive higher intelligibility scores than speakers who were rated as more foreign accented. These findings contradict the results of Munro and Derwing (1995) and Derwing and Munro (1997). According to Munro and Derwing (1995) and Derwing and Munro (1997), high scores on foreign accentedness do not necessarily result in reduced intelligibility. Differences in rating techniques could account for the differences in results. A universally accepted method of evaluating intelligibility does not yet exist. However, in most studies (i.e., Munro & Derwing, 1995; Derwing & Munro, 1997) the participants are asked to make orthographic transcriptions of the speech samples. The intelligibility is determined by the number of correctly transcribed words. However, in our study intelligibility was measured using three statements anchored by seven-point Likert scales. While transcribing directly determines what the listeners actually understood, Likert scales do not. Even if the listeners indicated on the Likert scales that an utterance was difficult to understand, it does not necessarily mean the listeners would be unable to transcribe the words or understand the message correctly. Furthermore, it could be argued that a foreign accent results in more reduced intelligibility in the Dutch language than in the English language. It is possible that the interaction between the Dutch and Spanish sound systems has a different influence on accentedness and intelligibility than the interaction between the Spanish and English phonological systems has (Piske et al., 2001; Flege et al., 2003). More research is needed to determine which specific elements of pronunciation have the most influence on intelligibility and what the most valid techniques of rating it are (Derwing & Munro, 2005).

In accordance with previous results of Ryan and Carranza (1975), Ryan et al. (1977), Brennan and Brennan (1981) and Fuertes et al. (2012), it appears that native listeners tend to downgrade nonnative speakers because of foreign accentedness. According to Lambert (1967), standard speech style is generally evaluated more favourably than the speech of an ethnic variety. In the present study, deviation from standard Dutch seemed to evoke stereotyped impressions, which had influence on the status ratings (Lambert, 1967). Since the

participants could only listen to a short speech sample, their impression of the speaker's status was based on a limited amount of information. Nevertheless, the Spanish speakers received lower status ratings, irrespective of language proficiency. One should be aware that only a limited amount of information can evoke stereotypes and that these biases appear, regardless of the speaker's proficiency in a second language. A L2 learner can be judged as less intelligent due to a foreign accent, which can affect the speaker's employability. Therefore, L2 learners, as well as native speakers, should be aware of the effects of non-native accents.

Our second research question investigated to what extent familiarity with the Spanish language influenced the listeners' ratings of accentedness, intelligibility and status towards the speech of Spanish L1 learners of Dutch. The results indicated that familiarity with Spanish speakers of Dutch did not affect the ratings of accentedness, intelligibility or status. These results contradict the findings of Gass and Varonis (1984) and Derwing and Munro (1997). Gass and Varonis concluded that 'familiarity with a particular nonnative accent facilitates comprehension of the speech of another nonnative of the language background' (1984, p. 81). Results of Derwing and Munro (1997) also indicated that familiarity with a certain accent would have a positive influence on intelligibility. According to Derwing and Munro (1997), the listeners who were familiar with a certain language were able to successfully identify the foreign accent and scored higher on intelligibility. In the present study, we did not verify the listener's ability to identify the L1 of the speaker. Therefore, we can speculate that the listeners in this study who were familiar with Spanish learners of Dutch did not recognize the Spanish accent of the speakers. Some participants indicated they assumed to be listening to Turkish learners of Dutch. It is possible that the listener needs to recognize the foreign accent to better understand the utterance. In future research it would be interesting to examine whether the listener recognizes the speaker's L1 successfully.

In order to illustrate the restrictions on generalizability of our results and to make suggestions for further research, the limitations of this study need to be considered. First of all, only two speakers per condition were rated by the native Dutch listeners. Presumably, these speakers were not a representative sample for all Spanish L1 learners of Dutch in each proficiency level. Therefore, the study must be replicated with more or different speakers.

Secondly, the participants within the same CEFR level were not always rated equally. For example, the female B1 speaker received clearly lower ratings in comparison to the male B1 speaker. The fact that the participants rated their level of Dutch themselves using the CEFR

Self-Assessment Grid, could explain these variances. It could be argued that the actual level of Dutch of the Spanish speakers differed from the level that they assigned to themselves, since the assessing method was not completely objective. For example, the male B1 speaker is assigned with the lowest accentedness rating and the highest intelligibility score of the L2 speakers. It is possible that the B1 male has a more advanced level of Dutch than he assumes. Therefore, the speakers should be assessed by experienced raters in further research.

Thirdly, direct comparisons across our results and the results of previous studies are difficult to make since each research has used different methods. There is no universally accepted measuring instrument for accentedness and different techniques are used to collect speech material. In various studies, participants were asked to read sentences or paragraphs (i.e., Ryan & Carranza, 1975; Ryan et al., 1977; Brennan & Brennan, 1981), whereas in others, subjects were asked to repeat speech material (i.e., Piske et al., 2001) or samples of free L2 speech were recorded (i.e., Munro & Derwing, 1995; Derwing & Munro, 1997). We assume that the elicitation technique used can affect the outcome. The material used in this study contained artificially high ratios of sounds that were difficult to pronounce for Spanish speakers (Burgos et al., 2014b). This could have caused higher ratings of accentedness than material with a more normal distribution of Dutch sounds would.

In future research it would be interesting to examine whether the listener's knowledge of the speakers' L1 language could affect their accentedness, intelligibility and status ratings. We did not have sufficient respondents whose language proficiency in Spanish was adequate to explore this. However, results of Winke, Gass and Myford (2012) indicated that the listeners who had studied the speakers' native language, were biased in their ratings. For example, listeners who had learned Spanish assigned significantly less harsh rating scores to the Spanish L1 learners of English.

In summary, the results of this study indicated that language proficiency and accentedness affect the intelligibility of foreign accented speech. Furthermore, it appeared that native listeners tend to downgrade L2 speakers because of nonnative accentedness. These results should raise awareness of the impact of foreign accentedness, since speaking with a non-standard accented seems to evoke stereotypes and can have severe social consequences.

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## **Appendix 1: Speakers**

Recordings of the following Spanish L2 learners were selected from the corpus of Spanish L1 Dutch L2 (Burgos et al., 2014b):

### **A1 speakers**

BASSIST-SP-F-L2-5 (A1-female)

BASSIST-SP-M-L2-14 (A1-male)

### **A2 speakers**

BASSIST-SP-F-L2-25 (A2-female)

BASSIST-SP-M-L2-2 (A2-male)

### **B1 speakers**

BASSIST-LA-F-L2-7 (B1-female)

BASSIST-SP-M-L2-30 (B1-male)

### **B2 speakers**

BASSIST-LA-F-L2-18 (B2-female)

BASSIST-LA-M-L2-34 (B2-male)

The following Dutch native speakers were recorded for the present study:

### **ABN speakers**

ABN-female

ABN-male

## Appendix 2: Online questionnaire

Beste deelnemer,

Voor onze bachelor scriptie voor de studie Communicatie- en Informatiewetenschappen aan de Radboud Universiteit Nijmegen voeren wij een onderzoek uit. Wij willen u vragen deel te nemen aan dit onderzoek door deze vragenlijst in te vullen.

Het invullen van de vragenlijst zal 5 tot 10 minuten in beslag nemen. Tijdens het eerste deel beluistert u een fragment waarover een aantal vragen gesteld zullen worden. In het tweede deel zullen er vragen gesteld worden over uw achtergrond. Ga bij het beantwoorden van de vragen af op uw eerste ingeving; er zijn geen foute antwoorden mogelijk.

Uw antwoorden zullen zorgvuldig worden geanalyseerd en niet worden gebruikt voor andere doeleinden dan dit onderzoek.

Bij voorbaat dank voor het invullen!

---

U bent een...

man

vrouw

Wat is uw leeftijd?

...

Wat is uw nationaliteit?

...

Wat is uw moedertaal?

...

Wat is uw hoogst afgeronde opleiding?

Basisonderwijs

Middelbaar onderwijs

MBO

HBO

WO

---

In het volgende deel van de vragenlijst krijgt u een fragment te horen. Wij vragen u om zorgvuldig te luisteren naar het fragment.

---

Nu volgt een aantal stellingen over de spreker die u net hebt gehoord. U kunt telkens aangeven in hoeverre u het oneens of eens bent met de stelling door op het bolletje van uw keuze te klikken.

Ik vind de spreker onverstaanbaar.

helemaal mee oneens      0 0 0 0 0 0 0      helemaal mee eens

Ik heb moeite de spreker te verstaan.

Helemaal mee oneens      0 0 0 0 0 0 0      helemaal mee eens

Ik zou precies op kunnen schrijven wat de spreker heeft gezegd.

Helemaal mee oneens      0 0 0 0 0 0 0      helemaal mee eens

De spreker heeft ...

een slechte uitspraak	0 0 0 0 0 0 0	een goede uitspraak
een sterk buitenlands accent	0 0 0 0 0 0 0	geen buitenlands accent
Nederlands niet als moedertaal	0 0 0 0 0 0 0	Nederlands wel als moedertaal
geen vloeiend Nederlandse uitspraak	0 0 0 0 0 0 0	een vloeiend Nederlandse uitspraak

---

De spreker komt op mij over als:

laag opgeleid	0 0 0 0 0 0 0	hoog opgeleid
niet intelligent	0 0 0 0 0 0 0	intelligent
onsuccesvol	0 0 0 0 0 0 0	succesvol
arm	0 0 0 0 0 0 0	rijk
onvriendelijk	0 0 0 0 0 0 0	vriendelijk
onaardig	0 0 0 0 0 0 0	aardig
slecht van aard	0 0 0 0 0 0 0	goed van aard
onbetrouwbaar	0 0 0 0 0 0 0	betrouwbaar
onbehulpzaam	0 0 0 0 0 0 0	behulpzaam
gierig	0 0 0 0 0 0 0	gul

De spreker lijkt me lui.

helemaal mee oneens      0 0 0 0 0 0 0      helemaal mee eens

De spreker lijkt me gezellig.

helemaal mee oneens      0 0 0 0 0 0 0      helemaal mee eens

De spreker lijkt me gedreven.

helemaal mee oneens      0 0 0 0 0 0 0      helemaal mee eens

De spreker lijkt me saai.

helemaal mee oneens      0 0 0 0 0 0 0      helemaal mee eens

---

Ten slotte willen wij u vragen enkele vragen te beantwoorden over uw talenkennis.

---

Ik beheers de volgende talen:

	Niet	Slecht	Enigszins	Voldoende	Redelijk	Goed	Uitstekend
Engels	0	0	0	0	0	0	0
Spaans	0	0	0	0	0	0	0
Duits	0	0	0	0	0	0	0
Frans	0	0	0	0	0	0	0
Italiaans	0	0	0	0	0	0	0
Portugees	0	0	0	0	0	0	0

Kent u mensen die Nederlands spreken met een Spaans accent?

0 Ja

0 Nee

---

Einde vragenlijst, hartelijk dank voor uw deelname!